WHAT IS CLAIMED IS:

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1. An organic waveguide comprising:

a core section made of organic polymer; and

a clad section covering the core section and made of inorganic dielectric having a lower refractive index than that of the core section.

2. The organic waveguide as set forth in claim 1, wherein the inorganic dielectric to be the clad section is formed by a sputtering method, CVD method, or vapor deposition method.

3. The organic waveguide as set forth in claim 1, wherein a portion of the clad section constitutes a masking clad section which serves as a mask when processing the core section.

4. The organic waveguide as set forth in claim 2, wherein a portion of the clad section constitutes a masking clad section which serves as a mask when processing the core section.

5. The organic waveguide as set forth in claim 1, wherein a light-shield film is formed around the core section including the clad section.

6. The organic waveguide as set forth in claim 2, wherein a light-shield film is formed around the core section including the clad section.

7. The organic waveguide as set forth in claim 1, wherein the inorganic dielectric constituting the clad section is silicon oxide.

8. The organic waveguide as set forth in claim 2, wherein the inorganic dielectric constituting the clad section is silicon oxide.

9. The organic waveguide as set forth in claim 1, wherein a main component of the organic polymer constituting the core section is polyimide.

10. The organic waveguide as set forth in claim 2, wherein a main component of the organic polymer constituting the core section is polyimide.

11. The organic waveguide as set forth in claim 9, wherein the polyimide is a polyimide containing no silane.

12. The organic waveguide as set forth in claim

10, wherein the polyimide is a polyimide containing no silane.

13. The organic waveguide as set forth in claim 9, wherein the polyimide is a fluorinated polyimide.

14. The organic waveguide as set forth in claim 10, wherein the polyimide is a fluorinated polyimide.

15. The organic waveguide as set forth in claim 1, wherein an adhesive layer for improving adhesion between the organic polymer and the inorganic dielectric is provided between the core section and the clad section.

16. The organic waveguide as set forth in claim 2, wherein an adhesive layer for improving adhesion between the organic polymer and the inorganic dielectric is provided between the core section and the clad section.

17. The organic waveguide as set forth in claim 15, wherein the adhesive layer is formed before the organic polymer to be the core section is subjected to thermalpolymerization.

18. The organic waveguide as set forth in claim 16, wherein the adhesive layer is formed before the organic polymer to be the core section is subjected to thermalpolymerization.

19. A method for manufacturing an organic waveguide, comprising the step of forming an inorganic dielectric layer to be a clad section on an organic polymer layer processed into a core section so as to cover the core section, said inorganic dielectric layer being formed by a CVD method, sputtering method, or vapor deposition method.

20. A method for manufacturing an organic waveguide, comprising the steps of:

forming an organic polymer layer which becomes a core section by processing;

forming an inorganic dielectric layer to be a clad section on the organic polymer layer;

processing the inorganic dielectric layer into a shape covering only an upper surface of the core section; and

processing the inorganic dielectric layer into the core section by dry etching using as a mask the inorganic dielectric layer processed.

21. The method as set forth in claim 19, including the step of forming a light-shield film covering the inorganic dielectric layer to be the clad section.

22. The method as set forth in claim 20, including the step of forming a light-shield film covering the inorganic dielectric layer to be the clad section.

23. The method as set forth in claim 19, including the step of forming an adhesive layer for improving adhesion between the organic polymer layer and the inorganic dielectric layer before forming the inorganic dielectric layer on the organic polymer layer.

24. The method as set forth in claim 20, including the step of forming an adhesive layer for improving adhesion between the organic polymer layer and the inorganic dielectric layer before forming the inorganic dielectric layer on the organic polymer layer.

25. The method as set forth in claim 23, wherein

the adhesive layer is formed before the organic polymer layer is subjected to thermalpolymerization.

26. The method as set forth in claim 24, wherein the adhesive layer is formed before the organic polymer layer is subjected to thermalpolymerization.

27. The method as set forth in claim 19, wherein a surface of the organic polymer layer is subjected to a plasma process before the inorganic dielectric layer is formed on the organic polymer layer.

28. The method as set forth in claim 20, wherein a surface of the organic polymer layer is subjected to a plasma process before the inorganic dielectric layer is formed on the organic polymer layer.

29. The method as set forth in claim 27, wherein the plasma process is carried out using a gas containing at least an oxygen element.

30. The method as set forth in claim 28, wherein the plasma process is carried out using a gas containing at least an oxygen element.

31. The method as set forth in claim 27, wherein the plasma process is carried out using a gas containing at least a nitrogen element.

32. The method as set forth in claim 28, wherein the plasma process is carried out using a gas containing at least a nitrogen element.

33. An optical part in which an organic waveguide and an optical element such as a photo-emitting element, photo-receptive element, and lens are formed on a single substrate,

said optical part having an organic waveguide which includes a core section made of organic polymer and a clad section covering the core section and made of inorganic dielectric having a lower refractive index than that of the core section.

34. An optical part in which an organic waveguide and an optical element such as a photo-emitting element, photo-receptive element, and lens are formed on a single substrate,

said optical part having an organic waveguide which includes a core section made of organic polymer and a clad section covering the core section and made

of inorganic dielectric having a lower refractive index than that of the core section, said inorganic dielectric to be the clad section being formed by a sputtering method, CVD method, or vapor deposition method.

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35. An optical part in which an organic waveguide and an optical element such as a photo-emitting element, photo-receptive element, and lens are formed on a single substrate,

said optical part having an organic waveguide which is manufactured by a manufacturing method which includes the step of forming an inorganic dielectric layer to be a clad section on an organic polymer layer processed into a core section so as to cover the core section, the inorganic dielectric layer being formed by a CVD method, sputtering method, or vapor deposition method.

36. An optical part in which an organic waveguide and an optical element such as a photo-emitting element, photo-receptive element, and lens are formed on a single substrate,

said optical part having an organic waveguide which is manufactured by a manufacturing method which

includes the steps of:

forming an organic polymer layer which becomes a core section by processing;

forming an inorganic dielectric layer to be a clad section on the organic polymer layer;

processing the inorganic dielectric layer into a shape covering only an upper surface of the core section; and

processing the inorganic dielectric layer into the core section by dry etching using as a mask the inorganic dielectric layer processed.

37. A method for manufacturing an optical part in which an organic waveguide and an optical element such as a photo-emitting element, photo-receptive element, and lens are formed on a single substrate,

said optical part having an organic waveguide which includes a core section made of organic polymer and a clad section covering the core section and made of inorganic dielectric having a lower refractive index than that of the core section,

wherein, using a semiconductor laser as the photo-emitting element, a bonding pad of the semiconductor laser or a pad used in wiring is formed in a same step with a light-shield film which is to cover the clad

section of the organic waveguide.

38. A method for manufacturing an optical part in which an organic waveguide and an optical element such as a photo-emitting element, photo-receptive element, and lens are formed on a single substrate,

said optical part having an organic waveguide which includes a core section made of organic polymer and a clad section covering the core section and made of inorganic dielectric having a lower refractive index than that of the core section, said inorganic dielectric to be the clad section being formed by a sputtering method, CVD method, or vapor deposition method,

wherein, using a semiconductor laser as the photo-emitting element, a bonding pad of the semiconductor laser or a pad used in wiring is formed in a same step with a light-shield film which is to cover the clad section of the organic waveguide.

39. A method for manufacturing an optical part in which an organic waveguide and an optical element such as a photo-emitting element, photo-receptive element, and lens are formed on a single substrate,

said optical part having an organic waveguide

which is manufactured by a manufacturing method which includes the step of forming an inorganic dielectric layer to be a clad section on an organic polymer layer processed into a core section so as to cover the core section, the inorganic dielectric layer being formed by a CVD method, sputtering method, or vapor deposition method,

wherein, using a semiconductor laser as the photo-emitting element, a bonding pad of the semiconductor laser or a pad used in wiring is formed in a same step with a light-shield film which is to cover the clad section of the organic waveguide.

40. A method for manufacturing an optical part in which an organic waveguide and an optical element such as a photo-emitting element, photo-receptive element, and lens are formed on a single substrate,

said optical part having an organic waveguide which is manufactured by a manufacturing method which includes the steps of:

forming an organic polymer layer which becomes a core section by processing;

forming an inorganic dielectric layer to be a clad section on the organic polymer layer;

processing the inorganic dielectric layer into a

shape covering only an upper surface of the core section; and

processing the inorganic dielectric layer into the core section by dry etching using as a mask the inorganic dielectric layer processed,

wherein, using a semiconductor laser as the photo-emitting element, a bonding pad of the semiconductor laser or a pad used in wiring is formed in a same step with a light-shield film which is to cover the clad section of the organic waveguide.

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